Global Warming & Your Food

A Publication of the Cool Foods Campaign
A Joint Project of the Center for Food Safety and the CornerStone Campaign

IS INDUSTRIAL AGRICULTURE COOKING THE PLANET?

DID YOU KNOW that our food system is a major contributor to global warming? The U.S. food system uses between 17-19% of the total energy supply in the country,[i, ii, iii, iv] contributing a significant amount of greenhouse gas emissions to the atmosphere everyday.

How is this possible? Greenhouse gases are generated in many ways and many are created even before our food is grown.

On large-scale, modernized industrial farms (which traditionally grow only one or two crops—called monoculture—that rely heavily on pesticides, fertilizers, and fossil fuels), greenhouse gases are created in a multitude of ways. Pesticide and fertilizer applications, irrigation, lighting, transportation, and other machinery are powered by greenhouse gas-emitting fossil fuels. The production of synthetic fertilizers and pesticides alone require the equivalent use of over 123 million barrels of oil, making them one of the largest contributors to greenhouse gas emissions in agriculture.[v]

The overuse of agricultural chemicals pollutes watersheds and kills plants that could otherwise capture greenhouse gases and actually reduce global warming. As the plants decompose they emit methane, a greenhouse gas, into the atmosphere.[vi, vii, viii, ix] Methane is also emitted by the 95 million cows raised each year in the United States. The waste from these animals, and 60 million hogs raised every year,[x] are collected and stored in stagnant manure pits which release not only a pungent smell, but more methane.

Once our food is grown it is transported throughout the country to grocery stores and markets. The average American meal has traveled about 1,500 miles before it arrives on your plate.[xi] All told, the U.S food system uses the equivalent of over 450 billion gallons of oil every year.[xii]

WHAT YOU CAN DO: REDUCING YOUR CARBON FOODPRINT

You can have a major influence on global warming by making better food choices, and reducing your "FoodPrint."[xiii] Your "FoodPrint" reflects the amount of greenhouse gases that were created in the production and shipping of the food that you buy. The "Coolest" foods have the lowest FoodPrint and are made without producing excess greenhouse gases. When foods that produce higher FoodPrints—those considered "Hot"—are avoided, we reduce our individual contributions to global warming. An easy way to tell if your food is "Cool" or "Hot" is to ask yourself these 5 basic questions before you buy.

1) Is this food organic?

▲ Organic foods are produced without the use of energy-intensive synthetic pesticides and fertilizers, growth hormones, antibiotics, and they are not genetically engineered or irradiated.

▲ In addition to the emissions from producing fertilizers, nitrous oxide—a very potent greenhouse gas—is emitted when these chemicals are applied to farmland.[xiv] Conventional fertilizers also pollute water sources, which kills fish and plants and emits methane,[xv] also a very potent greenhouse gas.

▲ Unlike organic farming, conventional agriculture contributes to erosion by overusing synthetic pesticides. Not only does erosion emit carbon dioxide,[xvi, xvii] but it transports agricultural chemicals to water sources.

▼ *To Be Cooler:* Buy organic and look for the USDA organic label to ensure that the food you eat is "certified organic."

2) Is this product made from an animal?

Conventional meat—eg. beef, poultry, pork, dairy, and farmed seafood—are the #1 cause of global warming in our food system. Animals in industrial systems are fed foods they can not biologically process. They are confined to unhealthy and overcrowded cages—conditions that contribute to malnutrition and disease. In an attempt to keep animals healthy they are sprayed with over 2 million pounds of insecticides, and their cages are sprayed with over 360,000 pounds of insecticides every year.[xviii, xix] They also ingest an astounding 84% of all the antimicrobials, including antibiotics, used annually in the United States.[xx]

MAIN OFFICE: 660 Pennsylvania Ave., SE, Ste 302, Washington, DC 20003 ▲ WEST COAST: 2601 Mission St., Ste 803, San Francisco, CA 94110
www.centerforfoodsafety.org ▼ www.cornerstonecampaign.org

▲ Every year, livestock consume about half of all of the grains and oilseeds that are grown in the U.S., thereby consuming over 14 billion pounds of fertilizers and over 174 million pounds of pesticides. Producing all of these chemicals requires huge amounts of energy and is a major cause of global warming.

Conventional meat—eg. beef, poultry, pork, dairy, and farmed seafood—are the #1 cause of global warming in our food system.

▼ *To Be Cooler:* Limit your consumption of conventional meat, dairy, and farmed seafood. Buy organic meat and dairy whenever possible, since these foods are produced without energy-intensive synthetic pesticides and herbicides, and look for wild (not farmed), local seafood.

3) Has this food been processed?

▲ Compared to whole foods such as fruits and vegetables, processed foods require the use of energy-intensive processes such as freezing, canning, drying, and packaging. Processed foods are usually sold in packages that contain an ingredients label and are located in the center aisles of most grocery stores.

▼ *To Be Cooler:* Do your best to avoid processed foods all together, but "certified organic" processed foods are a good alternative.

4) How far did this food travel to reach my plate?

▲ Transporting food throughout the world emits 30,800 tons of greenhouse gas every year.[xxi] The average conventional food product travels about 1500 miles to get to your grocery store. [xxii]

▼ *To Be Cooler:* Choose locally produced foods or foods grown as close to your home as possible. Look for country of origin labels on whole foods and avoid products from far away.

5) Is this food excessively packaged?

▲ Packaging materials, like plastic, are oil-based products that require energy to be created and are responsible for emitting 24,200 tons of greenhouse gas every year.[xxiii]

▼ *To Be Cooler:* Buy whole foods. Purchase loose fruits and vegetables (rather than bagged or shrink-wrapped), buy bulk beans, pasta, cereals, seeds, nuts, and grains, and carry your own reusable grocery bags.

FOOD CHOICE AND BEYOND

Want to reduce global warming? Join our Cool Foods Campaign and help take a bite out of global warming by changing the way you eat.

The Cool Foods Campaign shows the connections between the foods we eat and their contribution to global warming. The aim of the Campaign is to inform people about the impact of their food choices across the entire food system. We hope to inspire a groundswell of informed people committed to making sustainable food choices to reduce their "FoodPrint." Our campaign seeks solutions to the problem of global warming, and focuses on agricultural practices that can reduce and reverse this trend.

You can reduce your FoodPrint by making conscious food choices that contribute to the reduction in global warming. To keep up-to-date on the Cool Foods Campaign, and for more information about what you can do to lower your FoodPrint, visit our website at www.coolfoodscampaign.org.

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[iv] Pimentel, David. Impacts of Organic Farming on the Efficiency of Energy Use in Agriculture. Organic Center, Cornell University. August 2006.

[v] Own calculations using data from: West, T; Marland, G. (2002). A synthesis of carbon sequestration, carbon emissions, and net carbon flux in agriculture: Comparing tillage practices in the United States. Agriculture, Ecosystems, and Environment, 91:217-232; General Accounting Office (GAO). (2001). Agricultural Pesticides: Management Improvements Needed to Further Promote Integrated Pest Management. GAO-01-815; Food and Agriculture Organization of the United Nations (FAO UN). (2004). Statistical Yearbook. Online at www.fao.org/statistics/yearbook/vol_1_1/pdf/a07.pdf

[vi] Giani, Luise; Ahrensfeld, Elke. (2002). Pedobiochemical indicators for eutrophication and the development of "black spots" in tidal flat soils in the North Sea coast. J. Plant Nutr. Soil Sci., 165:537-543.

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[x] United States Department of Agriculture (USDA). (2002). Census of Agriculture. National Agricultural Statistics Service.

[xi] See supra at note iii.

[xii] Own calculations using data from Pimentel, David; Pimentel, Marcia. (2008). "Energy and Society" in Food, Energy, and Society: Third Edition. David Pimentel and Marcia Pimentel (eds.). CRC Press: Boca Raton, FL.

[xiii] The term "environmental foodprint" was coined by Jennifer Wilkins of Cornell University's Division of Nutritional Sciences in 2006. The Cool Foods Campaign uses the term "FoodPrint" to refer to an individual's contribution to global warming, based upon the food they eat. This includes the total amount of greenhouse gases produced to grow, process, package, and transport that food.

[xiv] US EPA. (2007). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005. Environmental Protection Agency, Washington, D.C.

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[xxii] See supra at note iii

[xxiii] See supra at note xxi